REPSOL MEETS DEMANDS OF COMPETITIVE OIL MARKET WITH RED HAT

The oil and gas industry faces constant change, from rapid price fluctuations to shifting regulations and investment demands. To better handle dynamic business and stay competitive, Repsol needed to migrate its proprietary UNIX system to a more agile, cost-effective enterprise open source infrastructure. To achieve these goals, the company migrated its SAP environment to Red Hat Enterprise Linux for SAP Applications, supported by Red Hat Satellite. As a result, the company has reduced costs and planned downtime and gained greater system flexibility and agility to keep up with the industry’s constantly changing demands.

“We have calculated that we’ve saved approximately 80% with the new Red Hat Enterprise Linux environment.”

XAVIER VILCHES
SYSTEMS ENGINEER, REPSOL

SOFTWARE AND SERVICES
Red Hat® Enterprise Linux®
Red Hat Satellite

HARDWARE
Commodity x86 servers

HEADQUARTERS
Madrid, Spain

OIL AND GAS INDUSTRY
25,000 EMPLOYEES

BENEFITS
• Lowered hardware and software costs by 80% and reduced vendor lock-in
• Reduced planned downtime for SAP systems
• Cut system response time by 10%–15%
• Gained greater flexibility and availability
KEEPING UP WITH CHANGING INDUSTRY DEMANDS
To succeed in the oil and gas industry, companies must have the agility to address sudden shifts in pricing, regulations, and other market factors.

Repsol, Spain’s largest oil company, uses several SAP applications to support a wide variety of its global business functions—from exploration, refining, and service stations to purchasing and human resources. To run these applications, Repsol used the HP-UX operating system with Intel Itanium processors and Windows servers. But these proprietary solutions were costly, inflexible, and could not keep up with industry demands. HP hardware was expensive to purchase and maintain. And in addition to general infrastructure-related costs, Repsol paid recurring personnel and server costs. Repsol also struggled with frequent system downtime. Jobs on its HP-UX platform took up to several hours, instead of several minutes.

“We were not experiencing the high availability that we need to effectively do our work,” said Xavier Vilches, systems engineer at Repsol.

Repsol tested some of its SAP systems on a Windows application server but was not satisfied with its performance. To reduce costs and gain greater flexibility, automation, and efficiency, Repsol decided to move to open, standardized systems and migrate its entire infrastructure to a Linux environment running on x86 hardware.

MIGRATING TO AN OPEN SOURCE SOLUTION
To replace its proprietary system, Repsol sought a reliable open source platform that would provide high availability (HA) for key systems and applications.

“One of the biggest complexities to migrating a SAP environment as big as ours is time,” said Vilches. “The applications we run on SAP are critical, so doing the migration quickly but well was very important.”

Due to past experience and success, Repsol decided to use Red Hat Enterprise Linux as the foundation of its SAP environment.

“We had a department that was already using Red Hat solutions, so there was a level of trust there,” said Vilches. “And it was quite clear from the start that Red Hat had more experience with SAP than other open source vendors, such as SUSE. We didn’t see the need to test other operating systems.”

Repsol initially implemented Red Hat Enterprise Linux 5 but has updated to version 6. In addition, the company uses Red Hat Satellite, an easy-to-use system management solution, to effectively manage its growing Red Hat environment and keep it running efficiently and secure.
IMPROVING COSTS AND PERFORMANCE WITH RED HAT

LOWER HARDWARE AND SOFTWARE COSTS
By migrating from HP to an open source platform, Repsol significantly reduced recurring costs for hardware and software acquisition, maintenance, and support services.

“This is the main benefit we are seeing compared to the previous solution,” said Vilches. “We have calculated a cost savings of approximately 80% with the new environment running Red Hat Enterprise Linux on x86 servers.”

IMPROVED PERFORMANCE AND AVAILABILITY
Previously, configuring high availability on the HP-UX platform could take Repsol’s engineers up to several hours to complete due to the complexity of making changes and necessary extended downtime.

“When you have to change the system configuration due to a new business requirement, you have to configure the HA cluster very carefully. It has some risk for the system’s availability and minimizing that risk requires large downtime,” said Vilches.

Operating on a standard platform has eliminated downtime due to platform changes and made adding new servers and migrating between platforms easier. As a result, performance and availability have improved, and higher system availability has resulted in a 10%-15% improvement in system response time.

By increasing employee productivity and system availability, Repsol can work effectively to stay competitive. “With HP-UX, we only had high availability on certain systems,” said Vilches. “With Red Hat, we have high availability in all environments—including development, integration, application server, and production—adding value to the business.”

GREATER FLEXIBILITY
With its new environment, Repsol has also gained more flexibility for channeling new resources to its servers. For example, expanding a server online to add memory resources was a complex task with its previous infrastructure but can be completed quickly and easily with the new infrastructure based on Red Hat Enterprise Linux.

MORE FREEDOM OF CHOICE
Repsol’s previous platform was not effectively compatible with third-party software the company uses for critical capabilities, such as monitoring and automation. The new Red Hat Enterprise Linux environment runs these applications and their plug-ins seamlessly.

“Running our SAP systems on Red Hat Enterprise Linux lets us use standard x86 servers and hence avoid vendor lock-in. Red Hat Enterprise Linux is compatible with third-party software,” said Vilches.
FUELING CONTINUED INNOVATION

Repsol continues to seek new ways to innovate with its Red Hat environment. The company is considering migrating to Red Hat Enterprise Linux 7 to take advantage of new capabilities and prepare its IT environment for future business demands.

“Migrating to Red Hat Enterprise Linux will offer shorter boot times and a new XFS file system that will help minimize downtime for our SAP systems,” said Vilches.

Repsol’s next challenges are to automate, standardize, and simplify its operations. “The challenge we face will be to adapt our infrastructure to meet these goals,” said Vilches. “The good news is that Red Hat is already supporting solutions like SAP HANA, if we decide to migrate our SAP systems in the future.”

ABOUT REPSOL

Repsol is one of the world’s leading integrated oil and gas companies. It operates along the entire energy value chain, including exploration, production, refining, marketing, and new energy R&D. Repsol’s corporate headquarters is located in Madrid, and its U.S. headquarters is in Houston, Texas. The company is present in more than 40 countries, with 25,000 employees worldwide.